

What is claimed is:

1. An audio processing and image generating apparatus comprising:

5 means for analyzing an audio signal; and
 means for generating a line drawing image based on a result of an analysis of said audio signal.

10 2. An audio processing and image generating apparatus according to claim 1, wherein

15 said means for analyzing an audio signal performs a frequency analysis of an audio signal for a certain period of time, and

20 said means for generating a line drawing image generates a predetermined line drawing image based on a result of said frequency analysis of said audio signal.

25 3. An audio processing and image generating apparatus according to claim 1, wherein

30 said means for analyzing an audio signal performs an amplitude analysis of an audio signal for a certain period of time; and

35 said means for generating a line drawing image generates a predetermined line drawing image based on a result of said amplitude analysis of said audio signal.

4. An audio processing and image generating apparatus

according to claim 1, wherein said line drawing image
comprises a three-dimensional line drawing image.

5 5. An audio processing and image generating apparatus
according to claim 4, wherein said three-dimensional line
drawing image is an image comprising a substantially linear
line drawing image extending between a right side and a left
side on a display screen and a non-linear line drawing image
based on an result of an analysis of said audio signal, said
non-linear line drawing image being included in said
substantially linear line drawing image.

6. A method of audio processing and image generating
comprising the steps of:

analyzing an audio signal; and

generating a line drawing image based on a result of
an analysis of said audio signal.

7. A method of audio processing and image generating
20 according to claim 6, wherein said line drawing image
comprises a three-dimensional line drawing image.

8. A method of audio processing and image generating
according to claim 7, wherein said three-dimensional line
25 drawing image is an image comprising a substantially linear
line drawing image extending between a right side and a left
side on a display screen and a non-linear line drawing image

based on an result of an analysis of said audio signal, said non-linear line drawing image being included in said substantially linear line drawing image.

5 9. A recording medium for storing a program, said program comprising the steps of:

analyzing an audio signal; and

generating a line drawing image based on a result of an analysis of said audio signal.

10 10. A recording medium according to claim 9, wherein said step of analyzing an audio signal comprises the step of performing a frequency analysis of an audio signal for a certain period of time, and

15 said step of generating a line drawing image comprises the step of generating a predetermined line drawing image based on an result of said frequency analysis of said audio signal.

20 11. A recording medium according to claim 9, wherein said step of analyzing an audio signal comprises the steps of:

performing a fast Fourier transformation to detect a frequency spectrum from an audio signal for a certain period of time;

25 detecting a plurality of peak values in each of a frequency range equal to or higher than a predetermined

frequency and a frequency range lower than said
predetermined frequency range in said detected frequency
spectrum; and

5 extracting a predetermined number of largest peak
values from said detected peak values and determining an
order of arrangement in each of said frequency range equal
to or higher than said predetermined frequency and said
frequency range lower than said predetermined frequency
range, and

10 said step of generating a line drawing image comprises
the step of generating a predetermined line drawing image
based on said determined order of arrangement.

12. A recording medium according to claim 9, wherein
15 said step of analyzing an audio signal comprises the
steps of extracting a predetermined number of largest peak
values from peak values of amplitudes of sounds in an audio
signal for a certain period of time and calculating
gradients between respective adjoining peaks corresponding
20 to said extracted peak values to determine a combination of
gradients comprising a positive gradient and/or a negative
gradient, and

said step of generating a line drawing image comprises
the step of generating a predetermined line drawing image
25 based on said combination of gradients comprising a positive
gradient and/or a negative gradient.

13. A recording medium according to claim 9, wherein said line drawing image comprises a three-dimensional line drawing image.

5 14. A recording medium according to claim 13, wherein said three-dimensional line drawing image is an image comprising a substantially linear line drawing image extending between a right side and a left side on a display screen and a non-linear line drawing image based on an
10 result of an analysis of said audio signal, said non-linear line drawing image being included in said substantially linear line drawing image.

15 15. A program comprising the steps of:
analyzing an audio signal; and
generating a line drawing image based on a result of an analysis of said audio signal.

20 16. A program according to claim 15, wherein said step of analyzing an audio signal comprises the step of performing a frequency analysis of an audio signal for a certain period of time, and
said step of generating a line drawing image comprises the step of generating a predetermined line drawing image
25 based on an result of said frequency analysis of said audio signal.

17. A program according to claim 15, wherein
said step of analyzing an audio signal comprises the
steps of:

5 performing a fast Fourier transformation to detect a
frequency spectrum from an audio signal for a certain period
of time;

10 detecting a plurality of peak values in each of a
frequency range equal to or higher than a predetermined
frequency and a frequency range lower than said
predetermined frequency range in said detected frequency
spectrum; and

15 extracting a predetermined number of largest peak
values from said detected peak values and determining an
order of arrangement in each of said frequency range equal
to or higher than said predetermined frequency and said
frequency range lower than said predetermined frequency
range, and

20 said step of generating a line drawing image comprises
the step of generating a predetermined line drawing image
based on said determined order of arrangement.

25 18. A program according to claim 15, wherein
said step of analyzing an audio signal comprises the
steps of extracting a predetermined number of largest peak
values from peak values of amplitudes of sounds in an audio
signal for a certain period of time and calculating
gradients between respective adjoining peaks corresponding

to said extracted peak values to determine a combination of gradients comprising a positive gradient and/or a negative gradient, and

5 said step of generating a line drawing image comprises the step of generating a predetermined line drawing image based on said combination of gradients comprising a positive gradient and/or a negative gradient.

10 19. A program according to claim 15, wherein said line drawing image comprises a three-dimensional line drawing image.

15 20. A program according to claim 19, wherein said three-dimensional line drawing image is an image comprising a substantially linear line drawing image extending between a right side and a left side on a display screen and non-linear line drawing images based on an result of an analysis of said audio signal, said non-linear line drawing image being included in said substantially linear line drawing
20 image.